

And They're Off

Motion and Design

- Assessment #2, And They're Off
- Teacher's Guide, Section 5, pages 20-23

Assessment:

- Students work in teams of two to design a race vehicle. Two teams race their vehicles against each other. This blackline provides assessment guidelines for the two teams of students racing at one station.
- See the STC Motion and Design teacher's guide for objectives, set-up, materials and procedure.

Assessment Criteria :

- Criteria are listed as "considerations". A teacher need not check off all the blanks as they move about the room assessing student understanding of concepts and process skills.
- A teacher may prefer to have a list of criteria in mind and simply write abbreviated notes on each student rather than maintain a checklist.
- If needed, modify the criteria to meet the needs of your class.
- Criteria incorporates questions listed at the end of Assessment #2, the Concepts Skills and Attitudes page in the teacher's guide (section 2, page 5) and the NC Science Standards.

► CRITERIA	► STUDENT NAMES	►	►	►	►
Is the student able to identify the energy source of the vehicle?					
Does the student make use of his/her science notebook and refer to past data to help solve today's problems? <i>Note: Students are now designing for speed. Do they have an understanding that data recorded earlier can help solve new design problems?</i>					
Has the student designed a way to record results?					
Is the student actively building, testing and modifying the vehicle?					
Does the student understand and make appropriate changes as indicated by the tests and time trials?					
Can the student identify the forces acting on the vehicle he/she designed? <i>Example:</i> <ul style="list-style-type: none"> • Friction • Gravity • Inertia • Force • Moving Air 					

GRADE 5 GOAL 4 - Motion and Design

SCORE	CRITERIA	STUDENT SCORE	NOTES
4▶	<ul style="list-style-type: none"> ▶ Planning, writing and drawing show increased clarity and depth of understanding ▶ Builds with creativity and enthusiasm ▶ Is a risk taker and can usually back up a wild idea with a previous concept ▶ Has no difficulty meeting the criteria on the list ▶ Uses rich, well thought out vocabulary to communicate ideas ▶ Often refers to science notebook to support ideas 		
3▶	<ul style="list-style-type: none"> ▶ Builds with enthusiasm and confidence ▶ Has little difficulty meeting the criteria on the list ▶ Uses reasonable vocabulary to communicate ideas ▶ Planning, writing and drawing are easily interpreted ▶ May utilize science notebook for support of ideas 		
2▶	<ul style="list-style-type: none"> ▶ Indicates an understanding of design/motion concepts but has difficulty meeting the new challenge ▶ May overlook or shortcut many of the criteria on the list 		
1▶	<ul style="list-style-type: none"> ▶ Begins the challenge without a plan. ▶ Builds haphazardly. ▶ Shows little understanding of concepts. 		